
The American Diet: Voluntary Action vs. Government Action

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FOOD. ITS CUSTOMARY PURPOSE FOR MILLENNIA WAS TO SUSTAIN LIFE. EACH SPECIES, from bacteria to humans, has evolved so that it instinctively consumes a diet that is most beneficial, from the specialized diets of pandas to the omnivorous diets of chimpanzees and humans.

But in the past few centuries, due to technological developments and other factors, *Homo sapiens* has gotten off track. While technologically advanced nations have largely solved the age-old problem of hunger, many, including the United States, have come to treat food as entertainment, rather than as something that should be keeping our bodies running optimally. Our food, sad to say, is contributing in a major way to diet-related diseases.

There's general agreement that too many calories are promoting weight gain, and two-thirds of American adults are overweight or obese. Obesity, in turn, increases the risks of heart disease, diabetes, strokes, and numerous forms of cancer, with concomitant medical costs estimated to be around \$150 billion annually.

Numerous factors have contributed to the obesity epidemic over the past 30 years, but key is that we're simply eating too much. According to the United States Department of Agriculture (USDA), the number of calories available in the food supply jumped by 20 percent—from about 3,200 in the 1970s to 3,900 calories in the 2000s. And if those calories are there, you can bet that someone is going to eat them. Where are those calories coming from? Unfortunately, largely from such nutritional weaklings as soda pop and pizza and from the huge portions served by countless restaurants.

Probably the next most harmful substance in the food supply is salt, or, rather, sodium. Too much sodium is contributing to high blood pressure, which afflicts almost 90 percent of elderly Americans. High blood pressure is a silent killer that causes heart

attacks, strokes, and kidney disease. The average American is consuming about twice as much sodium as he or she should, with the vast majority of it coming from packaged and restaurant foods. Although most adults are advised to consume no more than 1,500 milligrams of sodium per day, major chain restaurants like Denny's and IHOP sell meals with two, three, or even four times as much. A typical can of soup provides at least two-thirds of a day's sodium.

With sodium, there's no one major culprit—not even potato chips or canned soup. Practically everything on grocery store shelves is a source of sodium. The bottom line, according to the former head of the National Heart, Blood, and Lung Institute and two colleagues, is that reducing sodium levels in packaged and processed foods by half would save about 150,000 lives per year (Havas *et al.*, 2004).

Next on the list of dietary problems are saturated fat and *trans* fat, which contribute to heart disease. Prior to 1990, *trans* fat was thought to be pretty innocuous, whereas it is now generally recognized to be, on a gram-for-gram basis, the most harmful fat in the food supply. Researchers at the Harvard School of Public Health estimated in 2006 that *trans* fat was causing 72,000 to 228,000 fatal and non-fatal heart attack, and probably 50,000 to 100,000 deaths, per year (Mozaffarian *et al.*, 2006).

Saturated fat is a separate problem. We get a good deal of that fat from red meat and cheese. Add to that the cholesterol from eggs and most other animal products. If we replaced much of the saturated fat in our diet with polyunsaturated fats, and reduced consumption of cholesterol, that would save, according to one conservative estimate, as many as 20,000 lives each year (Danaei *et al.*, 2009).

Too much refined sugars, from cane, beets, and corn, cause tooth decay and obesity. While it recommends that the average person consume no more than about eight teaspoons (32 grams) of sugar a day, USDA estimates that Americans are consuming about 28 teaspoons (112 grams) a day. The most harmful source of refined sugars is soft drinks, both because they bathe teeth in a cariogenic solution for long periods of time and because beverages appear to be more conducive to weight gain than solid foods.

Also impairing our diet is that we consume mostly refined grains in place of whole grains. Several recent studies indicate that refined carbohydrates, both simple and complex, may contribute about as much to heart disease as does saturated fat (Jakobsen *et al.*, 2010).

Together, excess salt, *trans* fat, saturated fat, and added sugars cause about 200,000 premature deaths every year. Because the illnesses that cause those deaths take decades to develop, and because the deaths cannot be pinned on specific foods, the awesome toll of diet-related deaths rarely makes for headlines. The story would be entirely different if a failed heart had a little label that said “cheese & steaks.”

In any case, the challenge before health officials is to identify and implement means of changing both personal habits and tastes and the composition of foods marketed by manufacturers and restaurants.

One thing that has become abundantly clear is that voluntary action, by itself, simply doesn't work. Regrettably, good words are typically not followed by good deeds. Let me present several examples and suggest measures that would help protect the public's health.

TRANS AND SATURATED FAT

To help educate consumers about *trans* fat in packaged foods, in 2006 the US Food and Drug Administration (FDA), after a 12-year gestation period, required food manufacturers to disclose the amount of *trans* fat on *Nutrition Facts* labels. That spurred many of them to switch to healthier oils. I estimate that, overall, the amount of artificial *trans* fat has declined by almost two-thirds over the past decade. Still, though, hundreds of millions of pounds of partially hydrogenated oil, with its *trans* fat, are being consumed each year and causing perhaps 10,000 to 20,000 deaths due to heart disease and diabetes.

But progress was slower in the restaurant world, because menus and menu boards don't list *trans* fat. To tackle the restaurant problem, New York City's health department mounted a year-long campaign to encourage restaurants to use oils that contain little or no *trans* fat. The result after one year? Zero percent change! The health department didn't waste its time again. Instead it, and subsequently the New York City Council, severely limited the *trans*-fat content of restaurant foods, and within 18 months the problem was solved. *Trans* fat was gone...and, yes, restaurants and bakeries survived perfectly well. Indeed, McDonald's said that it did not receive a single complaint when it changed its frying oil. But restaurants didn't necessarily use healthier oils elsewhere in the country.

Another factor promoting the exodus of *trans* fat from restaurants was that a San Francisco lawyer and my organization sued, or threatened to sue, Kraft, McDonald's, Burger King, and KFC. That encouraged those companies to get into high gear and get rid of most of their *trans* fat throughout the country. Other restaurants took notice.

At the same time, about a dozen cities and states—including California, Boston, Philadelphia, and Seattle—followed New York City's example and passed laws barring *trans* fat from restaurant foods. To this day, though, some large-chain restaurants and probably thousands of small ones in jurisdictions that have not passed *trans*-fat laws, continue to serve food loaded with *trans* fat.

Consider that the American Heart Association recommends that people consume fewer than 2 grams of *trans* fat a day, and the Dietary Guidelines for Americans advises people to "keep *trans* fatty acid consumption as low as possible." Now consider that at Bob Evans restaurants, an order of Stacked & Stuffed Caramel Banana Pecan Hotcakes has 7 grams of *trans* fat; and a standard order of three Buttermilk Hotcakes has 9 grams. At White Castle, the French fries, onion chips, and onion rings have between 2 and 10 grams of *trans* fat per order, depending on the product and the size. And at Long John Silver's, battered fish and shrimp have up to 4.5 grams of *trans* fat, while a fish dish with fries has 7 grams.

The FDA should simply ban partially hydrogenated oil to get rid of the remaining artificial *trans* fat. Denmark did that six years ago. Fortunately, oil processors, seed developers, and farmers have provided a sufficient supply of alternative oils that should work in every food in the marketplace. Replacing frying oils is easy; it takes more effort to replace shortenings that serve a structural purpose in such foods as doughnuts and frostings. Legally, all the FDA needs to do is declare that it no longer considers partially

¹Information obtained from company Web sites.

hydrogenated to be “generally recognized as safe” and then give industry a year or so to switch to healthier oils.

Cutting saturated fat is much harder than cutting *trans* fat. After all, saturated fat is abundant in meat and dairy products. Ideally, animals would be raised in ways that result in meat and dairy products that are lower in saturated fat. That could be accomplished by using certain breeds of dairy cows and beef cattle, keeping beef cattle on grass for more of their lives, and feeding dairy cows conjugated linoleic acid (leads to lower-fat milk) and rapeseed (leads to more unsaturated and less saturated fatty acids). Giving subsidies to growers for producing milk and meat in those ways would be one avenue. Meanwhile, consumers need to read labels.

SALT

In 1969, the White House Conference on Nutrition recommended that salt intake be reduced. A decade later, an FDA advisory committee reviewed the safety of salt and concluded that it was not “generally recognized as safe” at the levels consumed. Since then, countless other health authorities have urged people to consume less salt: the National Academy of Sciences, the American Medical Association, the World Health Organization, the National Heart, Lung, and Blood Institute...the list goes on and on. Unfortunately, for 40 years, the food industry has ignored requests by government officials and health agencies to cut the salt. How much progress have they made on their own? None. We’re actually consuming more salt now than we did 20 or 30 years ago, though that’s partly due to increased overall food consumption. Lately, spurred by the imminent release of targets set by dozens of city and state health departments and of a major report by the Institute of Medicine, some of the big food processors have announced that they are going to cut the salt. And a few companies have actually made progress. Campbell has reduced sodium by about 30 percent in many soups and V8 juice.

But overall, progress has been meager. In 2005, the Center for Science in the Public Interest identified the sodium contents of about 500 foods. Three years later we checked the sodium contents once again. The change? Negligible. Some foods did contain less—but a roughly equal number of products contained *more* sodium.

Two months ago, a committee of the Institute of Medicine published a landmark report that said that, in light of 40 years of wasted opportunity while the food industry did almost nothing but say “leave it to us,” the government should set limits on sodium levels in packaged and restaurant foods. And what is industry’s response?: let us lower salt voluntarily! As the Grocery Manufacturers Association said, it’s okay for government to regulate sodium in school foods, “but it’s less clear that the government has a role with regard to products that are sold widely throughout the marketplace.” If you think they’re trying to play government officials for suckers, I suspect you’re right.

Though salt may be the single most harmful substance in the food supply, the solution, of course, is not banning it and other sodium-containing food additives, but rather limiting the amount of sodium in various categories of foods, from bacon to bread. The British government, which has been mounting a serious and sophisticated sodium-reduction campaign, has set specific sodium targets for about 85 categories of foods and is

pressing industry to comply. Achieving those targets would lead to a one-third reduction of sodium intake. Improvements to date amount to about a 10 percent reduction...and the saving of roughly 7,000 lives each year.

It's important to realize that there is a lot of "low-hanging" salty "fruit." Although some companies might be using the least amount of salt and other sodium-containing additives feasible, many other companies are using far too much. For example, Banquet chicken pot pies contain 50 percent more sodium (per 100 grams) than Marie Callender's chicken pot pies, and Ken's Steakhouse Caesar salad dressing contains twice as much sodium as Walmart's Caesar salad dressing. It's clear that many companies can dramatically lower their sodium levels and still have perfectly marketable products.

WHOLE GRAINS

The 2005 Dietary Guidelines for Americans emphasized the value of consuming whole grains. General Mills began using more whole grains in all of its cereals, but, otherwise, progress has been spotty at best. According to the nonprofit Whole Grains Council, "Americans eat only about 11 percent of their grains as whole grains, despite government guidelines recommending that all of us make at least half our grains whole."

I'm not saying that white flour and white rice should be banned, or that consumers should be required to eat foods that they don't like. But companies could voluntarily replace some of the white flour with whole grain flour in almost everything they make—from pancakes to pasta. Depending on the food, probably up to 25 percent or so whole grain flour would not even be detectable. Government agencies—ranging from the Department of Defense to state departments of corrections—could play a role by requiring that more whole grains be served in cafeterias. The FDA should require that the percentage of whole grains in grain foods be disclosed prominently on labels. Foods that brag "made with whole grains" should be required to disclose just how much—or little—whole grains is in their products. And the Centers for Disease Control could be mounting national media campaigns explaining the health—and taste—benefits of whole grains.

CALORIES

Cutting calories is something that most Americans need to do. While that is something that each of us can do on our own, the federal government has begun encouraging industry to cut unnecessary calories from its offerings. Companies participating in the Healthy Weight Commitment Foundation have agreed to cut 1.5 *trillion* calories per year from their products by 2015. At first blush that sounds great, but once you get out your calculator, it doesn't look so wonderful. For starters, about 440 trillion calories are put into the food supply each year. Next, the industry took credit for supposedly removing about 500 billion calories from their products between 2008 and spring 2010—before the program even began! So you end up with supposed cuts that amount to only about *five or ten² calories* per person per day. But you shouldn't even believe that, because no company is going to handcuff its marketing whizzes and tell them that the company has

²Depending on how it is calculated.

hit its annual calorie limit and can't ship any more foods. This Healthy Weight Commitment Foundation may be more smoke and mirrors than substance. As for other voluntary action, few restaurants have cut their humongous portion sizes and few voluntarily list calories on their menus.

A few companies have been marketing 100-calorie packets of cookies and soft drinks, as if those are the answer to obesity. But something that the restaurant industry vehemently opposed could have a real impact: calorie disclosures on the menus and menu boards of chain restaurants. Because of local and state laws that industry fought for years, people in New York City, Philadelphia, Seattle, and California are already seeing such information. A federal law (that industry accepted only because it preempted the proliferating state and local laws) will kick into effect in the next year or so.

Beyond menu labeling, the FDA should require warning labels on soft drinks, otherwise known as "liquid candy." Soft drinks, quintessential junk foods, are a major source of calories and contributor to obesity. They should bear label statements noting their contribution to obesity and tooth decay and suggesting that people drink water or diet soft drinks instead. Congress also should consider disallowing the use of food stamps (from the Supplemental Nutrition Assistance Program, SNAP) for buying soft drinks. Currently, the several billion dollars a year that SNAP users spend on soft drinks can be seen as a subsidy to the industry, while it undermines low-income consumers' health.

FOOD DYES

One other area that indicates the insufficiency of voluntary action is artificial food dyes. A good index of the junkiness of our food supply is the *per-capita* consumption of food dyes, like Red No. 40 and Yellow No. 5. Americans are consuming about five times as much of those dyes—primarily in breakfast cereals, frozen desserts, candies, and other foods marketed for children—as we did 50 years ago. Research that is too-little-discussed has examined the effect of food dyes on children's behavior. Numerous studies and a meta-analysis have shown that dyes like Red 40 and Yellow 5 cause hyperactivity and degrade learning in some children. The British government commissioned two large studies and concluded that dyes simply do not belong in the food supply. It asked companies to stop using most dyes before January 1, 2010. The European Union is requiring most foods that contain dyes after July 2019 to bear a label warning of effects on children's activity levels. That likely will be the death knell of artificially dyed packaged foods in Europe.

Beyond their behavioral effects, studies have demonstrated that some dyes, such as Yellow No. 5 and Yellow No. 6, cause allergic reactions. More troubling is the evidence that several dyes (such as those two yellow ones) contain carcinogenic contaminants (such as benzidine) or cause cancer in animals (the evidence is most accepted for Red No. 3) (CSPI, 2010).

Companies also should voluntarily eliminate dyes from their products in the United States. But what we have now is a situation in which Kellogg's strawberry Nutri-Grain bar is naturally colored in Britain but colored with dyes in the United States, and McDonald's strawberry sundae is naturally colored in Britain, but colored with Red No. 40 in the United States. Fortunately, a wide range of natural colorings can be used instead of syn-

thetic dyes. At least two companies, the maker of NECCO Wafers and Starbucks, have eliminated dyes from all their products.

I am highly skeptical of depending primarily on voluntary industry action to solve America's dietary woes. Regrettably, perhaps sincerely felt good words typically have not been followed by good deeds. That's not to oppose voluntary actions—they're invaluable. And it's certainly not to let each and every person off the hook—we all bear ultimate responsibility for what goes into our mouths. But experience has shown that if we're going to lose some pounds and reduce rates of diet-related diseases, government action is an essential ingredient.

REGULATION VERSUS VOLUNTARY ACTION

Although I've emphasized the need for legislative or regulatory action to improve the American diet, I don't want to leave the impression that that is the only strategy that should be used. Companies absolutely should undertake voluntary actions on any number of fronts, ranging from providing more readable and informative labels to reducing sodium levels. Industry can move a lot faster than government regulators—but government is often needed to provide the level playing field that would not disadvantage the more conscientious companies. And each and every consumer must make an effort to choose a healthier diet. After all, it is our bodies that will benefit.

PAST AND POSSIBLE FUTURE SUCCESSES

While the scientists and regulators battle things out in Washington, agriculture schools and others certainly can play a role in affecting the American diet. Just think of some past successes:

- Trimmed carrots have created a new market for the carrot industry.
- Bagged, washed salad greens contributed to a tripling of consumption over the past 20 years, according to USDA food consumption statistics (USDA-ERS, 2010). Modified-atmosphere packaging has been a key technology to make that happen.

What are future blockbuster marketing advances? Laboratory researchers should certainly be funded to develop new products, such as:

- Salt substitutes, or salt enhancers, or new kinds of salt crystals to enable reductions in sodium levels in different kinds of foods.
- How about a safe, high-potency sweetener that actually tastes good?
- And how about meat replacements made from safe plant products? That would help reduce meat consumption and the associated health problems.

I must say, though, that even if such products were developed, we shouldn't expect too much. For instance, even though consumption of *non-caloric* sweeteners has increased over the years, consumption of *caloric* sweeteners has not decreased (Lempert, 2004; BNET, 2010). Moreover, cancer questions swirl around aspartame, acesulfame-K, and saccharin. Even with meat substitutes, there can be problems: one meat substitute, which is made

from a fungus and marketed as Quorn frozen foods, causes severe and fairly common allergic reactions, ranging from projectile vomiting to hives to anaphylactic reactions. Such products should not even be allowed on the market.

Agricultural economists could be contributing to the debate, as well:

- What are the health and economic costs of eating meat, instead of getting protein from plant products? And what are the environmental costs of meat production, considering the costs of producing fertilizer and pesticides to grow feed, soil erosion, and air and water pollution from feedlots and hog and poultry factory farms?
- How could support programs for the dairy industry be re-jiggered to encourage dairy farmers to feed cows in ways (discussed above) that reduce the saturated-fat content of milk?
- Economists need to examine how taxes and subsidies could be used to promote healthier diets: excise taxes on soft drinks; taxes levied at slaughterhouses on fatty beef cattle; subsidizing fruit and vegetable consumption via SNAP, school meals, and other federal food and feeding programs. Economists can estimate how much such economic measures would nudge the American diet in a healthier direction.

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